

Pspatial Audio Equalisation Guide

EQ Characteristics in Stereo Lab

| EQ Characteristic | A | A2 | A3 | B | B2 | C | D | E | F | G | H | J | K | S |
|-------------------|--|----------------------|-------------|--------|-------------|--------------------------------------|------------|---------------|---------------|--------------------------|---------------|--------------|---------|--------------|
| Name | RIAA | Decca LP | TELDEC/AES | NAB | Columbia LP | CCIR / CG** | Quad 22 | 500-Flat | Flat/Acoustic | European 78s | American 78s | Columbia 78s | Ceramic | Displacement |
| To shelf, atten | 500R-13.7 | 500C-13.7 | 500R-10.5 | 500-16 | 500C-16 | 350-10.5 | 350-5.5 | 500R-0 | n/a | 300-0 | 300-5.5 | 300-16 | n/a | n/a |
| Similar to | BSI 33 | | AES | | | | Philips 78 | Telefunken 78 | | | | | | |
| Identical with | BS 1928 IEC 98A New Ortho' RIAA | Decca 33.3 London | DIN /TELDEC | NAB | Columbia LP | BSI 78 BS1928 (CG) IEC CCIR | | | | Blumlein European 78s | Decca 78 frrr | | | |

* Indicates no bass-shelf in characteristic. ** Original CCIR had no bass shelf but DGG added 3180µs (50Hz); thus CCIR= Coarse Groove

Major LP Equalisations & their parameters

| EQUALISATION | Time Constants | CODE | Bass Shelf Code |
|---|--|-----------|-----------------|
| NAB | 3180 µs (50Hz), 318 µs (500 Hz) and 100 µs (1,590 Hz) | 500-16 | X=12dB |
| Columbia (LP) | 1,590 µs (100 Hz), 318 µs (500 Hz), and 100 µs (1,590Hz) | 500C-16 | C=14dB |
| <i>Modification of bass-shelf of NAB to produce the Columbia is the origin of the 500 modified, or 500M term.</i> | | | |
| AES | 398 µs (400 Hz) and 64 µs (2,500 Hz) | 400-11.5 | A=16dB |
| London (Decca 33.3) | 1,590 µs (100 Hz), 318 µs (500 Hz), and 57 µs (2,800Hz) | 500C-12 | B=18dB |
| CCIR / Coarse Groove | 450 µs (350 Hz), and 50 µs (3,180 Hz), DGG added 3180 µs (50 Hz) | 350-10.5 | R=20dB |
| RIAA | 3180 µs (50 Hz), 318 µs (500 Hz), and 75 µs (2,120 Hz) | 500R-13.7 | N= None |
| TELDEC (DIN 45533) | 3180 µs (50 Hz), 318 µs (500 Hz), and 50 µs (3,180 Hz) | 500R-10.5 | |

Recording Equalisation Guide by Label: LP & Shellac

Red = Not in Quad's original list

Table indicates: pre-RIAA characteristic and change-over date along with Quad 22 recommendation and any modern revision

| LABEL | Quad | Old EQ | C/O Date | Pspatial | Pspatial Comment | LP DISCS |
|-----------------------|--------|-----------------|--------------|----------|--|----------|
| Allagro | B | 500C-16 | 1956 | B2 | Note late c/o date | |
| Allied | B | 500-16 | 1958 | B | Note late c/o date | |
| American Rec' Society | C | 400-11.5 | 1958 | A3 | Note late c/o date | |
| Angel | B | 500N-12.7 | 1952 | A | | |
| Archiv | C | | Not known | C | | |
| Argo | B | | by 1955 | B | | |
| Artist | | 500-16 | Not known | B | | |
| Atlantic | B | 500-16 | by 1955 | B | | |
| Audiophile | C | 500-11.5 | 1958 | A | Note late c/o date | |
| Bach Guild | B | 500-16 | to disc #529 | B | | |
| Banner | B | 500-16 | to #10002 | B | | |
| Bartok | C | Various | 1953 | A, B, C | B prior to 1952: C 1952-1953, A thereafter. | |
| Blue Note | C | 400-11.5 | 1955 | A3 | Note late c/o date. Select for best balance | |
| Brunswick | C | 400-11.5 | Not known | A3 | | |
| Caedmon | B | 350-10.5 | Not known | C | Used CCIR. Use B only for records #1001 - 1022 | |
| Capitol | C | 400-11.5 | by 1953 | A3 | Early adopter of RIAA, use A for all records after 1953 | |
| Capitol - Soria | C | 400-11.5 | Not known | A3 | | |
| Cetra - Soria | B | 500C-16 | 1961 | B2 | Note very late c/o date | |
| Colosseum | B | 500C-16 | 1954 | B2 | | |
| Columbia | B | 500C-16 | 1955 | B2 | Use B2 for all Columbia discs prior to 1955 | |
| Concert Hall | B | Various | 1956 | A or B | B for discs before 1954 | |
| Cook | A | 500-11.5/13.5 | 1958 | A or A2 | Note late c/o date | |
| Coral | C | 500-16 | 1958 | B | Late c/o from NAB | |
| Decca UK | A | Decca 33.3 | 1956 | A2 | See manual. | |
| Decca US | C | 500-16 | late 1955 | A, B, C | Evidence 500C-10.5, 400-11.5 and 500B-16 all were used. | |
| DGG | B | 350-10.5 | circa 1955 | C | Use C pre 1955. Strong suspicion DGG used DIN (A3) during 60 & 70s | |
| Dial | B | 500-16 | Not known | B | | |
| Durium | C | | Not known | C | | |
| Elektra | B | Various | by 1955 | B or A | Few records, adopted RIAA early | |
| EMI | | | to July 1953 | G | After 7/1953, use RIAA exclusively | |
| EMS | C | 400-11.5 | by 1955 | A3 | | |
| Epic | C | 500C-16 | by 1955 | B2 | | |
| Esoteric | C | 400-11.5 | by 1955 | A3 | | |
| Felsted | C | | Not known | C | | |
| Handel Soc' | B | 500C-16 | 1957 | B2 | Note late c/o date | |
| Haydn Soc' | B | 500C-16 | 1957 | B2 | Note late c/o date | |
| HMV (US) | B | 500R/N-16 | 1958 | B | Note late c/o date. But see EMI. | |
| London | A | 500C-10.5 | by 1955 | A2 | See manual. | |
| Lyrichord | B | 500-16 | 1957 | B | Note late c/o date | |
| Mercury | C | 400-11.5 | 1954 | A3 | | |
| MGM | C | 500-16/500-11.5 | 1952 | B or A | B prior to 1952: A after. | |
| Nixa | B | | Not known | B | | |
| Nocturne | | 400-11.5 | by 1955 | A3 | | |
| Oceanic | B | 500C-16 | 1958 | B2 | Note late c/o date | |
| Oiseau-Lyre | A | 500C-10.5 | by 1955 | A3 | TELDEC curve | |
| Oxford | B | 500C-16 | 1958 | B2 | Note late c/o date | |
| Parlophone | B | | Not known | B | | |
| Period | B | | Not known | B | | |
| Philharmonia | C | 400-11.5 | 1958 | A3 | Note late c/o date | |
| Philips | C | 350-10.5 | Not known | C | | |
| Polymusic | B | 500-16 | 1958 | B | Note late c/o date | |
| Rachmaninoff Soc' | B | 500C-16 | 1958 | B2 | Note late c/o date | |
| RCA | B | 500N-12.7 | 1952 | A | Certainly A after 1952 as RCA invented New Orthophonic | |
| Remington | B | 500-16 | 1958 | B | Note late c/o date | |
| Renaissance | B | 500C-16 | Not known | B2 | | |
| Stradivari | B | 500-16 | 1958 | B | Note late c/o date | |
| Swing | B | | Not known | B | | |
| TELDEC | | 500R-10.5 | after 1955 | A3 | Cut to proposed DIN standard 43355 | |
| Telefunken | A | 350-10.5 | until 1962 | C | Using CCIR. Note very late c/o date | |
| Tempo | B | 500-16 | 1958 | B | | |
| Urania | C | 500-16 | to 1954 | B or C | Some releases Eqd as 400-11.5 for which use C | |
| Vanguard | B | 500C-16 | by 1955 | B2 | | |
| Vox | B | 500C-16 | by 1955 | B2 | | |
| Westminster | B or C | NAB / AES | late 1955 | B or A | Dust jacket should indicate which | |



QUAD 22 BUTTONS

| | | | |
|---|--|--|--|
| A | | | |
| B | | | |
| C | | | |
| D | | | |

| LABEL (or type) | EQ | Pspatial | Pspatial Comment | SHELLAC DISCS |
|-------------------------------|---|----------|---|---------------|
| AOC | Acoustic | F | Budget label for Vocalion (see below). Ran until 1927 | |
| Aeolian-Vocalion | Acoustic | F | 1916 - 1926 | |
| Aeolian-Vocalion | 250N-0 | G | 1926 - 1933, with M in a circle (acquired by Brunswick in 1925) | |
| Ariel | Mail order discs (from Sheffield UK). Used variety of masters mostly from Parlophone from about 1924 until 1938 | A3 | Proprietary EQ (with curve thought to be similar to AES) | |
| Audiophile | Small catalogue of 78s on vinyl. | F | German label | |
| Beka | Acoustic | F | Specialist label founded in 1923: mainly Scottish traditional music | |
| Beltona | 300-0 | G | Division of RCA Victor from 1932 to 1950. Budget label | |
| Bluebird | 250N-0 / 250N-6 | G/H | Subsidiary of Vocalion, ceased production in 1934 | |
| Broadcast | 250N-0 | G | 1920-1925, both Hill & Dale and lateral cuts | |
| Brunswick | Acoustic | F | 1925 - 1940. | |
| Brunswick | 250N-0 | G | Sold to Decca (US) and revived in 1943 mostly for re-issues. | |
| Brunswick | 300N-5.5 | H | 1942 (founded) to 1951. Experiment with C on late discs | |
| Capitol | 250N-8 | H | 1951-1955 (AES curve) | |
| Capitol / Capitol Cetra | 400N-12.7 | C | German Capitol: produced by Teldec using original US Capitol masters. | |
| Capitol - Telefunken | 250N-8 (later 400N-12.7) | H/C | 1944 - 1955, frrr, prod. by Decca UK, matrix prefix DCAP | |
| Capitol (Europ.) | 300N-5.5 | H | founded 1930s by RAI, Italy | |
| Cetra | 250N-0 | G | founded 1949, Cetra prod. in US | |
| Cetra-Soria | 250N-0 | G | 1912 - 1927 mostly reissues from Vocalion | |
| Coliseum | 300-0 | G | 1901 - 1925 when acq by British Columbia Gramophone Co | |
| Columbia Phonograph (US) | Acoustic | F | Used WE system until receivership | |
| Columbia Phonograph (US) | 250-0 | G | Post CBS takeover in 1938 | |
| Columbia (American) | 300N-5.5 | H | Reportedly ca. 1941 - 1948. | |
| Columbia (American) | 300N-16 | J | 1927 - 1953. EMI(UK) since 1931 | |
| Columbia (British) | 300N-0 | G | Subsidiary of Decca formed in 1949 | |
| Coral | 400N-12 | A3 | pre 1946 | |
| Decca (American) | 300N-0 | G | 1946 - 1951 | |
| Decca (American) | 300N-5.5 | H | 1951 - 1953/! AES curve | |
| Decca (American) | 400N-12 | A3 | 1935 - 1944 | |
| Decca (British) | 300N-0 | G | 1944 - 1956 | |
| Decca (British frrr) | 300N-5.5 | H | Originally the German branch of Berliner's The Gramophone Company. | |
| Deutsche Grammophon | 300N-0 | G | to 1958 | |
| Dot | 400N-12 | A3 | Hill & Dale modulation | |
| Edison Diamond discs | Acoustic | F | Electrola Gesellschaft m.b. H. Berlin | |
| Electrola | Acoustic | F | Prior to 1927 | |
| EMI-HMV (British) | Acoustic | F | 1927 - 1963 | |
| EMI-HMV (British) | 300N-0 | G | EMI from 1931 | |
| Gramophone Company | 300N-0 | G | some, re-releases of acoustics mastered 1909-1926 | |
| His Master's Voice (Brit.) | Acoustic | F | 1927 - 1953, prod. by EMI(UK) | |
| His Master's Voice (Brit.) | 300N-0 | G | 1944 - 1955, frrr, prod. by Decca UK, | |
| L'Oiseau-Lyre | 300N-5.5 | H | London was label used to release Decca Ltd (UK) recordings in the USA. See Decca. | |
| London (USA) | London in the UK was used for releases from American labels which British Decca licensed. This EQ is therefore variable | | | |
| London (UK) | London in the UK was used for releases from American labels which British Decca licensed. This EQ is therefore variable | | | |
| Mercury | 250N-8 | H | Founded 1945 | |
| Mercury | 400N-12 | A3 | 1951 - Oct 1954; to matrix MGS0026, 7000 | |
| MGM (American) | 500N-12 | A | founded 1946. In the UK MGM was administered by EMI | |
| Nat. Gramophonic Soc. | 300-0 | G | 1926 - 1933, with M in a circle, cat. HHH to TTT and NGS.65 to NGS.102 | |
| Octacros | 300N-0 | G | 1931 - ?, Britain, a Synchronophone label | |
| Odeon | 250-0 | G | 1925 - 1928, with W in a circle (a Lindström label) | |
| Odeon | Probably 300N-0 | G | 1928 - 1936, matrix with £ in a circle (a Lindström label) | |
| Odeon | 300N-0 | G | 1931 - 1944, with © before matrix no., [Bc] | |
| Odeon | 300N-0 | G | to 1953, (1926 sub. of Brit. Columbia, 1931 sub. of EMI) | |
| OKeh | 250N-8 (400N-8) | H | 1926 - end (a Columbia label since 1926) | |
| Parlophone | 250-0 (300N-0) | F | 1925 - 1949 | |
| Pathé (inc Hill & Dale types) | Acoustic | F | Until 1928 (when Pathé was sold to British Columbia Gramophone) | |
| Pathé | 300N-0 | G | 1931 - 1944, with © before matrix no., [Bc] | |
| Philips | 300-5.5 | H | 1950 to 1953. Dutch founder ran Decca pressing shop. | |
| Polydor | 300N-5.5 | H | sub-label of Deutsche Grammophon | |
| RCA Victor | 300N-0 | G | 1931 - 1944, with □ after matrix no., EMI UK reissues, [Bc] | |
| RCA Victor | 500N-8/10/12 | A3 | Some instability in characteristic between 1944 and 1947 | |
| RCA Victor | 500N-12.3 | A | 1947 - Aug 1952 (Old Orthographic) | |
| RCA Victor | 500R-13.7 | A | RIAA after August 1952, after matrix E2RP4094 | |
| RCA Victor (European) | 300N-0 | G | 1930 - 1950 | |
| Regal | 250-0 | G | British budget-price label for Columbia. | |
| Regal Zonophone (Brit.) | 250-0 | G | Regal became R2 after the EMI merger in 1931 | |
| Regal Zonophone (Brit.) | 500N-0 | E | 1949 - 7/1953, matrix no. CAR6800 | |
| Scala | 300-0 | G | Budget label with masters mostly sourced from Aeolian | |
| Supraphon | 400N-0 | E | Czech, since 1932, a subsid. of Ultraphon | |
| Synchronophone | 300N-0 | G | 1931 - ?, Britain | |
| Telefunken | 300N-5.5 | H | 1944 - 1955, frrr, prod. by Decca UK, | |
| Telefunken | 400N-0 | E | 1951-1953, (Telefunken + Decca UK = TELDEC since 1950) | |
| Theme | 250N-6 | H | all N78 | |
| Turicaphon | 400N-0 | E | Switzerland, 1930 - , a subsid. of Ultraphon | |
| Ultraphon | 400N-0 | E | Europe 1929-1932, taken over by Telefunken | |
| Unison | 300-0 | G | 1926 - 1933, with M in a circle | |
| Victor (Victrola) | 250-0 | G | 1925 - 1931. Sold to RCA in 1930; see RCA Victor above | |
| Vocalion | Acoustic | G | From 1916 to about 1926 | |
| Vocalion | 250-0 | G | 1926 - 1933, to cat. X10029 A.0269 and K05312, with M in a circle | |
| Vocalion | 300N-5.5 | H | 1944 - 1955, frrr, prod. by Decca UK, series V1000 | |
| Voice of the Stars | 300N-0 | G | 1931 - 1944, with © before matrix no., [Bc] | |
| Zonophone | Acoustic | G | Pre 1925 | |
| Zonophone | 250N-0 | G | 1925 - 1944 | |

